

ABSTRACT OF THE DISCLOSURE

A filtered three-level transmitter is provided by filtering a binary electrical drive signal to produce a unit modulation pulse spanning four-bit-periods and describable by three parameters. One or more of the three parameters of the unit modulation pulse are adjusted to optimize a figure of merit associated with performance of an optical transmission system. A three-level electrical drive signal is then generated from the unit modulation pulse for input to a Mach-Zehnder modulator. The three parameters of the unit modulation pulse are each defined over a half-bit period and together are sufficient to describe a line-coded transmission eye diagram. The parameters are adjusted so that an optical transmission system in which the inventive transmitter is utilized is optimized with a set level of net chromatic dispersion.